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## ABSTRACT OF THE INVENTION

The present invention provides a motor controller capable of driving a synchronous motor having no position sensor stably at high efficiency by carrying out simple control. In order to attain this purpose, a reactive current is obtained from a motor current and a rotation phase, an error voltage is obtained from the reactive current and the command value of the reactive current, thereby obtaining a motor applied voltage command value  $V_a$  that is used to compensate for the  $V/f$  characteristic of the motor. Furthermore, the motor applied voltage command value  $V_a$  is applied to an output command computing section, and computed with the rotation phase signal of a wave generation section, thereby obtaining a signal for PWM driving the switching devices of an inverter circuit.